

AMENDMENT TO THE DRAWINGS:

The attached REPLACEMENT SHEET includes changes to Fig. 1. Specifically, Fig. 1 now shows distance d.

Attachments: One (1) REPLACEMENT SHEET including Fig. 1.

REMARKS

Applicants submit this Amendment in reply to the Office Action mailed September 22, 2005. By this Amendment, Applicants have amended the drawings, replacing Fig. 1. Accordingly, claims 17-32 and 34-36 remain pending in this application for reconsideration.

In the Office Action, the drawings were objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character not mentioned in the description: "distance d." Applicants have amended the drawings to include a reference to distance d. Accordingly, Applicants respectfully request withdrawal of the objection against the drawings.

In the Office Action, claims 17-32 and 34-36 were rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Applicants respectfully traverse this rejection.

The originally filed description and claims support the subject matter of claim 17. For example, paragraph 9 on page 4 recites a method for setting a predetermined clearance in an internal combustion engine between a rocker arm and a rocker arm actuated engine component. This recitation, among others, provides support for "a method of setting a predetermined clearance in a component drive train of an internal combustion engine."

In addition, paragraph 9 on page 4 recites a reference datum and further recites rotating the adjustment screw to adjust the position of the rocker arm to a first reference position. Paragraph 8 on page 4 recites a rocker arm that has a component engaging surface and Fig. 3A depicts such a component engaging surface as a valve engaging

surface (22). Finally, paragraph 37, beginning on page 13 recites that those skilled in the art will recognize this invention is capable of setting the clearance between a rocker arm and any other rocker arm actuated engine component, and is not limited to valves. This provides support for “(a) rotating an adjustment screw to adjust a position of a component engaging surface associated with a rocker arm from a reference datum position to a first reference.”

Paragraph 9 on page 4 further recites rotating the adjustment screw through a reference angle and recording a corresponding second reference position thereof. And paragraph 27 on page 10 recites rotating the adjustment screw in its second direction through a first predetermined angle. This provides support for “(b) rotating the adjustment screw through a predetermined reference angle and recording a second reference position of the component.”

Paragraph 9 on page 4 recites calculating a coefficient from the difference between the first and second reference positions and the reference angle. Thus, providing support for: “(c) calculating a coefficient from the difference between said first and second reference positions and said reference angle.”

Paragraph 9 on page 4 also recites using the coefficient to calculate an angular rotation of the adjustment screw corresponding to the predetermined clearance. This along with the above provide support for “(d) calculating an amount of angular rotation of the adjustment screw corresponding to a predetermined clearance between said component engaging surface and said reference datum using said coefficient.”

Finally, paragraph 9 on page 4 recites rotating the adjustment screw on the basis of the calculated angular rotation to set the predetermined clearance relative to the

reference datum, which provides support for “(e) rotating the adjustment screw said calculated amount of angular rotation to set the predetermined clearance relative to said reference datum.” Accordingly, Applicants respectfully request withdrawal of the Section 112, first paragraph, rejection against claim 17.

Claims 18-32 depend from claim 17. Accordingly, Applicants submit that dependent claims 18-32 are allowable for at least the same reasons that independent claim 17 is allowable.

The originally filed description and claims also support the subject matter of claim 34. For example, paragraph 37 on page 12 recites that the invention provides a method of setting a valve clearance gap in an automatic process. *See also*, Fig 2. And paragraph 9 on page 4 recites a method for setting a predetermined clearance in an internal combustion engine between a rocker arm and a rocker arm actuated engine component. Additionally, paragraph 4 on page 2 recites that the combination of the cam, cam follower, push rod, adjustment screw, rocker arm and rocker shaft is referred to herein as the “valve drive train.” These, among others, provide support for “a method of automatically setting a predetermined clearance in an engine valve drive train of an internal combustion engine.”

Paragraph 24 on page 9 recites among other aspects, pushing the adjustment screw into engagement with the cup of the push rod and at the same time displacing the rocker arm and eliminating backlash through the push rod. That is, pushing the adjustment screw into engagement with the cup of the push rod causes the rocker arm to move relative to the push rod and eliminates backlash. Thus, providing support for

“moving a rocker arm relative to a push rod and eliminating a backlash associated with a push rod and rocker arm.”

Paragraph 26, beginning on page 9 recites rotating the adjustment screw in a first direction until the linear sensor indicates a predetermined displacement of the second end of the rocker arm, moving the valve stem in the first direction to a third position intermediate its first and second positions (See Fig. 1.) Paragraph 26 adds that this predetermined distance is selected to be greater than or equal to a minimum value sufficient to place the valve drive train in tension with the backlash between the various drive components biased in one direction. These recitations provide support for “rotating an adjustment screw and setting a predetermined amount of backlash between the rocker arm and an engine valve.”

Fig. 2 shows a lock nut threadably connected to the adjustment screw and Fig 1 shows a predetermined force being applied to the lock nut. Furthermore, paragraph 32, beginning on page 11 recites the lock nut being tightened slightly by a predetermined force, adding that this induces a slight additional movement of the rocker arm in the second direction. And that to compensate for this, the adjustment screw is rotated in its second angular direction until the second end of the rocker arm is displaced by a predetermined correction distance. These recitations provide support for “applying a predetermined force to a lock nut threadably connected to the adjustment screw, rotating the lock nut in first direction, and tightening said lock nut to the predetermined force relative to said rocker arm; and rotating said adjustment screw in said first direction and correcting a change in an amount of backlash from the predetermined amount of backlash caused by applying the predetermined force to the lock nut.”

Accordingly, Applicants respectfully request withdrawal of the Section 112, first paragraph, rejection against claim 34.

Claims 35-36 depend from claim 34. Accordingly, Applicants submit that dependent claims 35-36 are allowable for at least the same reasons that independent claim 34 is allowable.

In view of the foregoing remarks, Applicants submit that the claimed invention complies with the written description requirement. Applicants therefore request withdrawal of the Section 112, first paragraph, rejections and timely allowance of all pending claims.

The Office Action contains characterizations of the claims and the related art with which Applicants do not necessarily agree. Unless expressly noted otherwise, Applicants decline to subscribe to any statement or characterization in the Office Action.

In discussing the specification, claims, and drawings in this Amendment, it is to be understood that Applicants are in no way intending to limit the scope of the claims to any exemplary embodiments described in the specification or abstract and/or shown in the drawings. Rather, Applicants are entitled to have the claims interpreted broadly, to the maximum extent permitted by statute, regulation, and applicable case law.

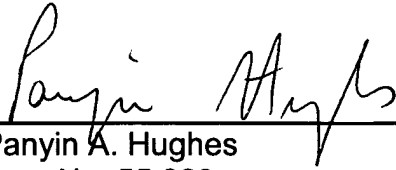
Please grant any extensions of time required to enter this Amendment and charge any additional required fees to our Deposit Account No. 06-0916.

Respectfully submitted,

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By:



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